International Congress for Battery Recycling
June 18 – 20, 2003
Lugano, Switzerland

Patronage
European Battery Recycling Association
European Portable Battery Association

Sponsored by:
Foreword

The International Congress for Battery Recycling 2003

The progress of the battery technology has been outstanding in the last few years. The production of conventional batteries, such as alkaline dry cells, lead-acid and nickel-cadmium batteries, continues to be massive with several billions of units per year. In addition, many new systems are invading the market: nickel-metal hydride batteries are acquiring a prominent role for electronic and tool applications and the lithium-ion batteries are rapidly becoming the power sources of choice for sophisticated consumer electronics, e.g., notebooks and cellular phones. Finally, the continuous concern on the air quality in large urban areas has promoted the request of a fast introduction on the road of low-emission vehicles. Accordingly, fleet of electric cars are now in demonstration in various cities and an increasing number of hybrid cars is assuming a progressively important role in the automobile sector. This market booming has not yet been accompanied by a proper concern on the appropriate methods of collection, disposal or recycling of the large number of batteries of different chemistries, size and environmental impact which are presently in circulation in all parts of the world. It is then of crucial importance to face the management of the spent batteries in all their aspects and problems. Although significant progress has been obtained in the past years in terms of development of collection programs and of recycling schemes of exhausted batteries, a lot is still to be achieved to reach an acceptable compromise between the cost and the efficiency of recycling.

This congress, which comes as the third edition of a successful series, provides an unique opportunity for approaching this topic by offering a perfect forum where battery experts can meet and share their experiences, discuss and find suitable solutions to the problems that still prevent a proper treatment of spent batteries.

In addition to that of assuring exciting technical program, also the tradition of the choice of elegant and beautiful sites is maintained by this 2003 edition of ICBR. Welcome to the congress center of Lugano, welcome to the lake!

Prof. Bruno Scrosati
Chairman of the Steering Committee

International Steering Committee

consists of:

Jan Bartels
STIBAT
Managing Director
Netherlands

Manfred Beck
Recycling International
Magazine Editor
Netherlands

Norm England
Portable Rechargeable Battery Association (PRBA)
President
USA

Jürgen Fricke
Foundation GRS Batterien
Chairman of the Board
Germany

Kinya Fujimoto
Battery Association of Japan (BAJ)
General Manager
Japan

Helmut Klammer
Batrec Industrie AG
Managing Director
Switzerland

Jill Ledger
CollectNiCad, Chairman
SAFT, Communication Director
France

Bruno Scrosati, Chairman
University of Rome
Department of Chemistry
Professor
Italy

Oliver Lindqvist
Chalmers University of Technology
Dep. of Inorganic Chemistry
Professor
Sweden

Toshio Matsuoka
Matsuoka Technical Consul. Ltd.
Consultant
Japan

Johan van Peperzeel
W.A. van Peperzeel B.V.
President
Netherlands

Alfons Westgeest
European Portable Battery Association (EPBA)
Secretary General
Belgium

Shane Thompson
INMETCO Inc.
International Accounts Director
USA

Alain Vassart
European Battery Recycling Association (EBRA)
President
Belgium

Allons Westgeest
European Portable Battery Association (EPBA)
Secretary General
Belgium
Location of the congress

The International Congress for Battery Recycling (ICBR 2003) will be held in the congress center of Lugano from 18 – 20 June 2003 in Lugano, Switzerland.

Congress Center  
Piazza Indipendenza 4  
6900 Lugano  

www.lugano-conventions.com

Travelling to Lugano

You can easily reach Lugano by plane, train and car. Lugano has an international airport offering direct scheduled flights to all over the world. If you are booking a flight to Zurich, Basel or Geneva, you will have a daily connection-flight to Lugano. The airport is about 5 km from the city. Lugano has also an excellent railway link to the Swiss airports.

The airport of Milano (Malpensa) is about 70 km from Lugano. Shuttle bus service from/to railway station is available.

www.sbb.ch/pv/index_e.htm
www.sea-aeroportimilano.it/eng/  
www.swiss.com

Who should attend?

- Battery producers
- Recycling companies
- Waste management companies
- Battery collection companies
- Associations in the field of battery waste management
- Financing organization for battery recycling
- Environmental authorities
- Laboratories for material science
- Universities and research institutes
- Consultants

Organizer of the ICBR

ICM AG  
International Congress & Marketing  
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Phone: +41 56 664 72 50  
Fax: +41 56 664 72 52  
Internet: www.icm.ch

Jeanette Duttlinger  
Congress Organizer

Erika Noé  
Congress Assistant

Nicole Erni  
Congress Assistant

Petra Fiorentin  
Congress Assistant
Congress Program ICBR 2003

**Wednesday, 18 June 2003**

09.00 – 12.30  Registration

13.00 – 13.10  “Welcome and introduction”
Prof. Bruno Scrosati, Chairman of the Steering Committee

13.10 – 13.30  Key-Note Speaker I
Alfons Westgeest, EPBA, Belgium

**Session:**  The impact of the recent legislation on batteries and WEEE
**Session Chairman:**  Dr. Jürgen Fricke, GRS Batterien, Germany

13.30 – 14.00  “Industry commitment to legislative development in Europe”
Jill Ledger, SAFT, France

14.00 – 14.30  “The impact of the WEEE and RoHS Directives on the collection of spent rechargeable batteries”
Ralf zur Steege, SANYO Energy (Europe), Germany

14.30 – 15.00  “What a waste of opportunities”
Jan Bartels, STIBAT, Netherlands

15.00 – 15.30  Coffee break

**Session:**  The collection and recycling of spent rechargeable batteries
**Session Chairman:**  Prof. Oliver Lindqvist, Chalmers University, Sweden

15.30 – 16.00  “European battery collection strategy”
Colin Thirlaway, Black & Decker, United Kingdom

16.00 – 16.30  “Ten years experience of a private collection program for power tools and spent batteries”
Udo Cerowski, Robert Bosch GmbH, Germany

16.30 – 17.00  “Concept for an international battery recycling program”
Ken Money & Shane Thompson, INMETCO Inc., USA

19.30  Networking dinner

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**Thursday, 19 June 2003**

**Session: Country reports on battery recycling I**
**Session Chairman: Shane Thompson, INMETCO Inc., USA**

09.00 – 09.30  “Battery recycling in Taiwan”
Hsiung-Wen Chen, Environmental Protection Administration, Taiwan

09.30 – 10.00  “Optimisation of recycling – how to improve recycling rate & quality not entailing excessive costs”
Dr. Jürgen Frcke, GRS Batterien, Germany

10.00 – 10.30  “Swiss battery recycling system: From voluntary arrangements to compulsory rules”
Alexander Brun, INOBAT, Switzerland

10.30 – 11.00  Coffee break

11.00 – 11.30  “A review of European risk assessment reports on metals used in batteries”
Dr. Jean-Pol Wiaux, CollectNiCad, Belgium

11.30 – 12.00  “Collection and recycling of spent batteries in Korea”
Dr. Jeong-Soo Sohn, Korea Institute of Geoscience & Mineral Resources, Korea

12.00 – 12.30  “Recycling of used portable batteries in Europe. The 2002 facts and figures and how to improve them”
Alain Vassart, EBRA, Belgium

12.30 – 14.00  Lunch

**Session: Country reports on battery recycling II**
**Session Chairman: Alain Vassart, EBRA, Belgium**

14.00 – 14.30  “Batrec news – Industrial recycling of spent Li-batteries”
Andreas Krebs, Batrec Industrie AG, Switzerland

14.30 – 15.00  “Overview of communication & awareness-building programmes on battery collection around Europe”
Emmanuel Beaurepaire, Consultant (CES), France

15.00 – 15.30  “Progress in Austria’s CHEMTEC battery recycling plant”
Dr. Volker Pawlisa, CHEMTEC, Austria

15.30 – 16.00  Coffee break

16.00 – 16.30  Key-Note Speaker II
European Commission (invited)

16.30 – 17.30  Round table “Pillars for a new battery directive”
Moderator: Manfred Beck, Recycling International, Netherlands
**Friday, 20 June 2003**

**Session:** Market & recycling challenges for new technologies  
**Session Chairman:** Prof. Bruno Scrosati, University of Rome, Italy

08.30 – 09.00 “Challenge for recycling new batteries and fuel cells”  
Farouk Tedjar, Recupyl, France

09.00 – 09.30 “Battery recycling: An other way”  
Dr. Rolf Zinniker, ETH Zürich, Institut für Elektronik, Switzerland

09.30 – 10.00 “The life cycle analysis of rechargeable batteries”  
Dr. Margret Wohlfahrt-Mehrens, Center for Solar Energy, Germany

10.00 – 10.30 “The prospect of fuel cell technology and its impact on batteries”  
Aik Rosenberg, Metal Tech Ltd., Israel

10.30 – 11.00 Coffee break

11.00 – 11.30 “A novel approach to alkaline and zinc carbon batteries recycling”  
Dr. Massimo Maccagni, Engitec, Italy

11.30 – 12.00 “X-ray monitoring & sorting of spent batteries”  
Prof. Paolo Massacci, University of Rome “La Sapienza”, Italy

12.00 – 12.30 “Focus on a recycling rate calculation”  
Marion Nicolet, Valdi, France

12.30 – 13.30 Lunch buffet

**Networking Dinner**

On Wednesday, June 18, a special Networking Dinner will be organized. Participants and accompanying persons can register on the form.

Don’t miss this unforgettable evening!

**Beautiful Lugano**

**Why not extend your stay in Lugano?**

Lugano is renowned for its mild climate, delightful scenery and luxuriant vegetation. There are innumerable excursions from cruises on the lake to cable-car trips in the mountains. A full range of sports activities is an attraction for visitors of all tastes.

The majestic mountain San Salvatore (912 m / 2991 ft) rises into the sky of Lugano, offering a unique perspective of the lake, the Lombardic plain and the magnificent range of the Swiss Savoy Alps.

The funicular takes you in about 10 minutes from the center of Lugano to the top of Switzerland’s sunniest mountain.

www.lugano-tourism.ch
Hotel Accommodation

For the participants of the congress a number of rooms are held until May 9, 2003 at a special rate in various hotels in Lugano. Rates are per room, per night and include breakfast.

Grand Hotel Villa Castagnola*****
Viale Castagnola 31
www.slh.com/villcast/
About 5 min walk from the congress center.

<table>
<thead>
<tr>
<th></th>
<th>Single room</th>
<th>Double room</th>
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| Grand Hotel Eden*****
Riva Paradiso 1
www.edenlugano.ch
About 20 min walk from the congress center.
| Single room | CHF 260.– (€ 174.–) | Double room | CHF 400.– (€ 294.–) |
| Hotel Lido Seegarten*****
Viale Castagnola 24
www.hotellido-lugano.com
About 5 min walk from the congress center.
| Single room | CHF 300.– (€ 200.–) | Double room | CHF 300.– (€ 200.–) |
| Hotel Bellevue au Lac*****
Riva A. Caccia 10
www.hotelbellevue.ch
About 15 min walk from the congress center.
| Single room | CHF 200.– (€ 134.–) | Double room | CHF 250.– (€ 167.–) |
| Hotel de la Paix*****
Via Cattori 18
www.delapaix.ch
About 15 min walk from the congress center.
| Single room | CHF 200.– (€ 134.–) | Double room | CHF 250.– (€ 167.–) |
| Hotel Lugano Dante*****
Piazza Cioccaro 5
www.hotel-luganodante.com
About 10 min walk from the congress center.
| Single room | CHF 200.– (€ 134.–) | Double room | CHF 260.– (€ 174.–) |

Registration Fees

Registration for the congress should be made by means of the registration form.

<table>
<thead>
<tr>
<th>Congress Fee</th>
<th>before May 9, 2003</th>
<th>after May 9, 2003</th>
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</thead>
<tbody>
<tr>
<td>Participants</td>
<td>€ 1’150.–</td>
<td>€ 1’300.–</td>
</tr>
<tr>
<td>Speakers</td>
<td>€ 690.–</td>
<td>€ 790.–</td>
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<tr>
<td>Students</td>
<td>€ 390.–</td>
<td>€ 450.–</td>
</tr>
<tr>
<td>Networking Dinner</td>
<td>€ 90.–</td>
<td>€ 100.–</td>
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<tr>
<td>Networking Dinner for accompanying persons</td>
<td>€ 100.–</td>
<td>€ 100.–</td>
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All prices excluding 7.6% VAT

Additional Proceedings

If it is not possible for you to attend the congress, you can purchase the complete proceedings at EURO 335.–. Participants will get the proceedings free of charge.

Payment

Payment should be made in EURO by bank transfer or by credit card. Wire payment plus 7.6% VAT to:

Bank: Neue Aargauer Bank, 5300 Turgi, Switzerland
Beneficiary: ICM AG
Account no.: 447941-72, Swift code: CRESCHZZ 80A in favour of: AHHBCH 22
Clearing: 5885
Remark: International Congress for Battery Recycling

Exhibition

A special exhibition will be organized for companies wishing to display their products or advertising materials.

The fee for a typical exhibition stand (1.5 m x 3 m) is EURO 3’000.– for the full time of the conference.

Space is limited, so take your chance now and book your exhibition stand today!